UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/699,922	10/30/2000	Brig Barnum Elliott	00-4026	8244

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EXAMINER
MICHALSKI, JUSTIN I

ART UNIT	PAPER NUMBER
2644	10

DATE MAILED: 08/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/699,922	ELLIOTT, BRIG BARNUM
	Examiner	Art Unit
	Justin Michalski	2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>05/17/2004</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-20 and 24</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) <u>17-20</u> is/are allowed.

6)☒ Claim(s) <u>1,3-9,11-16 and 24</u> is/are rejected.

7)☒ Claim(s) <u>2 and 10</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1.   Applicant's election without traverse of claims 1-20 and 24 in the reply filed on 17

May 2004 is acknowledged.

2.   This application contains claims 21-23 drawn to an invention nonelected without

traverse in the reply filed on 17 May 2004. A complete reply to the final rejection must

include cancellation of nonelected claims or other appropriate action (37 CFR 1.144)

See MPEP § 821.01.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1, 3, 4, 7, 8, 15, 16, and 24 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Plunkett (US Patent 5,386,478).

Regarding Claim 1, Plunkett discloses a method for adjusting an audio level of an

audio device (Figure 1), comprising: receiving a first audio signal (tone burst from

loudspeaker 14L, Column 3, lines 42-43) from the audio device (system 18); receiving a

data packet from the audio device (tone burst from loudspeaker 14R, Column 3, lines

43-44), the data packet comprising a second audio signal (Jones discloses 400 Hz tone,

Column 3, line 42); determining whether a difference between the first audio signal and

the second audio signal exceeds a threshold value; and adjusting the level of the audio

device when the difference between the first audio signal and the second audio signal

exceeds the threshold value (Plunkett discloses corrections can be made when

unbalances are found (i.e. threshold exceeded) (Column 3, lines 49-52). It would have

been obvious for one of ordinary skill in the art at the time the invention was made to

recognize the tone burst from loudspeaker 14R as a data packet containing amplitude

information as disclosed by Plunkett (Column 3, lines 44-49).

Regarding Claim 3, Plunkett further discloses determine whether the audio level

is to be increased or decreased (Plunkett discloses making the necessary balance

adjustments of gain controlled amplifiers which would include increasing or decreasing

the audio level) (Column 3, lines 49-52).

Regarding Claim 4, Plunkett further discloses generating a data packet

comprising a volume adjustment command, the volume adjustment command including

a flag indicating that the audio level is to be increased or decreased, transmitting the

data packet containing the volume adjustment command to the audio device (remote

link 32), and adjusting the audio level based on the flag (Plunkett discloses corrections

made through remote control 36 (i.e. generates data packet) to make necessary

balance adjustments (i.e. adjusting audio level) of gain controlled amplifiers) (Column 3,

lines 50-52).

Regarding Claim 7, Plunkett further discloses analysis (i.e. determining) (Column

3, line 49), based on the determining whether a difference between the first audio signal

and the second audio signal exceeds the threshold value, an amount to adjust the audio

level of the audio device, and wherein the adjusting includes: adjusting the audio level

based on the amount (Plunkett discloses corrections can be made when unbalances

are found (i.e. threshold exceeded) to make the necessary (i.e. based on amount)

balance adjustment (Column 3, lines 49-52)).

Regarding Claim 8, Plunkett discloses a system for adjusting an audio level of an

audio device (Figure 1), comprising: means for receiving (microphone 36) at least one

first audio signal (tone burst from loudspeaker 14L, Column 3, lines 42-43) from the

audio device (device 18); means for receiving (microphone 36) a data packet from the

audio device (tone burst from loudspeaker 14R, Column 3, lines 43-44), the data packet

comprising at least one second audio signal (Jones discloses 400 Hz tone, Column 3,

line 42); means for determining whether a difference the first audio signal and the

second signal exceeds a threshold value; and means for adjusting the audio level of the

audio device when the difference between the first audio signal and the second audio

signal exceeds the threshold value (Plunkett discloses corrections can be made when

unbalances are found (i.e. threshold exceeded) (Column 3, lines 49-52)). It would have

been obvious for one of ordinary skill in the art at the time the invention was made to

recognize the tone burst from loudspeaker 14R as a data packet containing amplitude

information as disclosed by Plunkett (Column 3, lines 44-49).

Regarding Claim 15, Plunkett discloses a method for determining whether to

adjust a volume of a remote audio device (Figure 1), the method comprising: receiving

at least one first audio signal (tone burst from loudspeaker 14L, Column 3, lines 42-43);

receiving a data packet comprising at least one second audio signal (tone burst from

loudspeaker 14R, Column 3, lines 43-44); determining a difference between first audio

signal and the second audio signal; comparing the difference to a threshold value;

generating a volume adjustment command when the difference exceeds the threshold

value (Plunkett discloses correction can be made when unbalances are found (i.e.

threshold exceeded) (Column 3, line3s 49-52); and transmitting the volume adjustment

command to the remote audio device (signal 32). It is inherent that the method be

contained on a computer-readable medium (either hardware or software) in order for the

device to function. It would have been obvious for one of ordinary skill in the art at the

time the invention was made to recognize the tone burst from loudspeaker 14R as a

data packet containing amplitude information as disclosed by Plunkett (Column 3, lines

44-49).

Regarding Claim 16, Plunkett discloses a method comprising: transmitting at

least one first audio signal (tone burst from loudspeaker 14L, Column 3, lines 42-43);

generating a data packet (tone burst from loudspeaker 14R, Column 3, lines 43-44), the

data packet comprising at least one second audio signal (Jones discloses 400 Hz tone,

Column 3, line 42); transmitting the data packet to a remote device (remote control unit

34); receiving a volume adjustment command from the remote device (signal 32), the

volume adjustment command comprising a flag indicating that the volume level is to be

increased or decreased and adjusting the volume level in response to the flag (Plunkett

discloses modules 24L and 24R for controlling loudness based on control signal (i.e.

flag) from remote unit 34 (Column 2, lines 36-45). It is inherent that the method be

contained on a computer-readable medium (either hardware or software) in order for the

device to function. It would have been obvious for one of ordinary skill in the art at the time the invention was made to recognize the tone burst from loudspeaker 14R as a data packet containing amplitude information as disclosed by Plunkett (Column 3, lines 44-49).

Regarding Claim 24, Plunkett discloses a method for adjusting an audio level of an audio device (Figure 1), comprising: receiving a first audio signal comprising a plurality of sub-bands (tone burst from loudspeaker 14L (Column 3, lines 42-43), Jones discloses test signal can be made of frequency bands, i.e. sub bands (Paragraph bridging columns 3 and 4); receiving a data packet (tone burst from loudspeaker 14R, Column 3, lines 43-44), the data packet comprising a second audio signal and a plurality of sub-bands (Plunkett discloses separately controllable frequency bands (i.e. sub-bands) (Column 3, lines 66-68)); determining, for each sub-band, whether a difference between the sub-band of the first audio signal and a corresponding sub-band of the second audio signal exceeds a threshold value; and adjusting the audio level of a sub-band at the audio device when the difference between a sub-band of the first audio source and the corresponding sub-band of the second audio signal exceeds the threshold value (Plunkett discloses corrections (i.e. determining) can be made when unbalances are found (i.e. threshold exceeded) (Column 3, lines 49-52) and independent gain adjustment for each band, Column 4, lines 3-4). It would have been obvious for one of ordinary skill in the art at the time the invention was made to recognize the tone burst from loudspeaker 14R as a data packet containing amplitude information as disclosed by Plunkett (Column 3, lines 44-49).

5.   Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Plunkett

(US Patent 5,386,478) as applied to claim 1 above, and further in view of Konstantinou

et al. (US Patent 6,584,201). Plunkett discloses a method as stated apropos of claim 1.

Plunkett does not disclose a reactivity setting value, and wherein the adjusting occurs

when a time period since a previous audio level adjustment equals or exceeds the

reactivity setting value. Konstantinou et al. discloses a remote automatic volume control

apparatus which polls for changes in sound every second to prevent continual

fluctuations in emitted sound level (i.e. adjusts after one second (reactivity time) has

passed since last adjustment) (Column 5, line 63 through Column 6, line 1). Therefore,

it would have been obvious to one or ordinary skill in the art at the time the invention

was made to combine the reactivity time with the method disclosed by Plunkett to

prevent continual fluctuations in the emitted sound as taught by Konstantinou et al.

6.   Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Plunkett

as applied to claim 1 above in view of Hadley et al. (US Patent 6,061,455). As stated

above apropos of claim 1 Plunkett makes obvious all elements of that claim. Plunkett

does not disclose the threshold value set by a user. Hadley et al. discloses an audio

system where a low and high threshold level is selected by the user (Column 2, lines

45-50). It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the user defined threshold with the method disclosed by

Plunkett in order to create a user selected sound level output for a more customizable

audio output.

7.   Claims 9, 11, 12, and 14 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Plunkett (US Patent 5,386,478) in view of Sansur (US Patent

6,169,807).

        Regarding Claim 9, Plunkett discloses a system for adjusting audio levels (Figure

1), comprising: a sensor (reference 10) configured to: receive a first audio signal (tone

burst from loudspeaker 14L, Column 3, lines 42-43), receive at least one data packet

(tone burst from loudspeaker 14R, Column 3, lines 43-44) comprising a second audio

signal (Jones discloses 400 Hz tone, Column 3, line 42), determine whether a difference

between volume of the first audio signal and the second audio signal exceeds a

threshold value, generate a response data packet when the difference exceeds the

threshold value (Plunkett discloses corrections can be made when unbalances are

found (i.e. threshold exceeded) (Column 3, lines 49-52) including a volume adjustment

command (signal 32), and transmit the response data packet; and an audio device

(references 18, 14R, and 14L) configured: transmit the first audio signal (from 14L via

path 12L), transmit the data packet to the sensor (from 14R via path 12R), receive the

response data packet (signal 32 to module 30), and adjust an audio level based on the

response data packet (control modules 24L and 24R). Plunkett does not disclose the

first and second signals being average volume signals. Sansur discloses a remote

automatic audio level control device which uses monitoring (i.e. receiving) average

audio levels to maintain a user defined volume level (Column 1, lines 50-57). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the use of average volume signals with the device disclosed by Plunkett to adjust the volume in order to produce a reliable method of comparing two signals for a user defined volume level.

Regarding Claim 11, as stated above apropos of Claim 9, Plunkett as modified makes obvious all elements of that claim. Plunkett further discloses the sensor is configured to determine whether the audio level of the audio device is to be increased or decreased (Plunkett discloses making the necessary balance adjustments of gain controlled amplifiers which would include increasing or decreasing the audio level (Column 3, lines 49-52).

Regarding Claim 12, as stated above apropos of Claim 9, Plunkett as modified makes obvious all elements of that claim. Plunkett further discloses the response data packet further includes a flag indicating that the audio level of the audio device is to be increased or decreased, and the audio device is configured to adjust the audio level based on the flag (Plunkett discloses corrections made through remote control 36 (i.e. generates data packet) to make necessary balance adjustments (i.e. adjusting audio level) of gain controlled amplifiers) (Column 3, lines 50-52).

Regarding Claim 14, as stated above apropos of Claim 9, Plunkett as modified makes obvious all elements of that claim. Plunkett further discloses the sensor is configured to determine an amount of audio level adjustment, and store the amount in the response data packet (Plunkett discloses analysis is used to make correction sent

through data packet 32 by sensor 36 to make necessary balance adjustments of gain

controlled amplifiers) (Column 3, lines 49-52).

8.   Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Plunkett

as modified as applied to claim 9 above, and further in view of Konstantinou et al. (US

Patent 6,584,201. As stated above apropos of claim 9, Plunkett as modified makes

obvious all elements of that claim. Plunkett does not disclose use of a reactivity value.

Konstantinou et al. discloses a volume control system which polls for changes in sound

every second to prevent continual fluctuations in emitted sound level (i.e. adjusts after

one second (reactivity time) has passed since last adjustment) (Column 5, line 63

through column 6, line 1). Therefore, it would have been obvious to one or ordinary skill

in the art at the time the invention was made to combine the reactivity time with the

information sent by the data packet as disclosed in the method by Plunkett as modified

to prevent continual fluctuations in the emitted sound.

Allowable Subject Matter

9.   Claims 17-20 allowed.

10.   Claims 2 and 10 are objected to as being dependent upon a rejected base claim,

but would be allowable if rewritten in independent form including all of the limitations of

the base claim and any intervening claims.

Response to Arguments

11.   Applicant's arguments with respect to claims 1-24 have been considered but are

moot in view of the new ground(s) of rejection.

Conclusion

12.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Justin Michalski whose telephone number is (703)305-

5598. The examiner can normally be reached on 8 Hours, 5 day/week.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Bill Isen can be reached on (703)305-4386. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

JIM

XU MEI
PRIMARY EXAMINER